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ABSTRACT

Services and resources provided through the ESEA Title I Program, the Comprehensive Instructional Program (CIP), and the Emergency School Assistance Program were used at the Ralph C. Robinson Elementary School to develop programs specifically aimed at satisfying the identified needs of individual pupils. The main thrust of the instructional program was directed toward increasing the reading skills of pupils in the primary grades. Since those activities resulting from special support programs were integrated with the regular school programs, all services and resources became a part of the regular instructional program and were aimed at satisfying the specific identified needs of the disadvantaged pupils. This research and development report of the programs devised at Ralph C. Robinson Elementary School during 1970-71 includes information on the following: (1) supporting programs and goals; (2) instructional program; (3) management and product evaluation, and cost effectiveness; (4) inservice and workshops, and, (5) conclusions and recommendations. There are many tables of statistics to substantiate the information. (Authors/SB)

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R E S E A R C H A N D D E V E L O P M E N T R E P O R T

Vol. V, No. 8 December, 1971

RALPH C. ROBINSON ELEMENTARY SCHOOL

1970--71

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PREFACE

An analysis has been made of certain performances of pupils at Ralph C. Robinson Elementary School. Some of the results are reported in this publication and reflect the cooperation of the administration and faculty of the school and the staff members of the Research and Development Division.

This analysis is part of an effort to develop a method of showing accountability for the educational responsibilities of the school system to the children of Atlanta. The data contained in this developmental endeavor should not be used or quoted out of context. The report is primarily for the use of the individual school and other school personnel who have an influence on improving the effectiveness of the instructional program. It provides data which show trends and which can be used for the purpose of making further examinations for promoting pupil progress.

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TABLE OF CONTENTS

	Page
INTRODUCTION	1
RATIONALE	1
NEEDS ASSESSMENT	2
GOALS OF THE INSTRUCTIONAL PROGRAM	2
PERFORMANCE OBJECTIVES	3
SUPPORTING PROGRAMS AND GOALS	
Title I Program	4
Comprehensive Instructional Program (CIP)	7
Emergency School Assistance Program (ESAP)	7
INSTRUCTIONAL PROGRAM	8
Baseline Data	9
MANAGEMENT EVALUATION	
Management and Control	10
School Operating Costs	13
Process	14
PRODUCT EVALUATION	14
Descriptive Data	17
Class Comparisons	19
Objective A	25
Objective B	27
Objective C	32
Objective D	40
COST EFFECTIVENESS	41
RETENTION	46
INSERVICE AND WORKSHOPS	47
CONCLUSIONS	47
RECOMMENDATIONS	51

LIST OF TABLES

Number		Page
1	LETTER RATING AND READINESS STATUS CORRESPONDING TO PER CENT OF PUPILS IN EACH CATEGORY -- GRADE ONE	16
2	RATINGS FOR PUPILS PERFORMANCE AND THE PER CENT OF PUPILS IN EACH CATEGORY OF THE METROPOLITAN ACHIEVEMENT TESTS -- GRADE ONE	16
3	GROUP DATA FOR THE METROPOLITAN READINESS TESTS -- GRADE ONE	17
4	GROUP DATA FOR THE METROPOLITAN ACHIEVEMENT TESTS -- GRADE ONE	18
5	ANALYSIS OF VARIANCE OF PERFORMANCES FOR TWO GROUPS OF A TOTAL OF 42 PUPILS AS MEASURED BY THE METROPOLITAN READINESS TESTS	20
6	ANALYSIS OF VARIANCE OF PERFORMANCES FOR TWO GRADE 1 CLASSES ON SUBTEST WORD KNOWLEDGE OF THE METROPOLITAN ACHIEVEMENT TESTS	22
7	ANALYSIS OF VARIANCE OF PERFORMANCES FOR TWO GRADE 1 CLASSES ON SUBTEST WORD ANALYSIS OF THE METROPOLITAN ACHIEVEMENT TESTS	22
8	ANALYSIS OF VARIANCE OF PERFORMANCES FOR TWO GRADE 1 CLASSES ON SUBTEST READING OF THE METROPOLITAN ACHIEVEMENT TESTS	23
9	ANALYSIS OF VARIANCE OF PERFORMANCES FOR TWO GRADE 1 CLASSES ON SUBTEST TOTAL READING OF THE METROPOLITAN ACHIEVEMENT TESTS	24
10	ANALYSIS OF VARIANCE OF PERFORMANCES FOR TWO GRADE 1 CLASSES ON SUBTEST TOTAL MATH OF THE METROPOLITAN ACHIEVEMENT TESTS	25
11	MEAN PERFORMANCE FOR GRADE 2 IN READING AREAS AS INDICATED BY THE METROPOLITAN ACHIEVEMENT TESTS	28
12	ANALYSIS OF VARIANCE OF PERFORMANCES FOR TWO GRADE 2 CLASES ON SUBTEST TOTAL READING OF THE METROPOLITAN ACHIEVEMENT TESTS	29
13	MEAN PERFORMANCE FOR GRADE 3 IN READING AREAS AS INDICATED BY THE METROPOLITAN ACHIEVEMENT TESTS	29
14	ANALYSIS OF VARIANCE OF PERFORMANCE FOR TWO GRADE 3 CLASSES ON SUBTEST TOTAL READING OF THE METROPOLITAN ACHIEVEMENT TESTS	30
15	MEAN PERFORMANCE FOR GRADE 4 IN READING AREAS AS INDICATED BY THE METROPOLITAN ACHIEVEMENT TESTS	31

LIST OF TABLES (Contd.)

Number		Page
16	MEAN PERFORMANCE FOR GRADE 5 IN READING AREAS AS INDICATED BY THE METROPOLITAN ACHIEVEMENT TESTS	31
17	MEAN PERFORMANCE FOR GRADE 6 IN READING AREAS AS INDICATED BY THE METROPOLITAN ACHIEVEMENT TESTS	32
18	MEAN PERFORMANCE FOR GRADE 7 IN READING AREAS AS INDICATED BY THE METROPOLITAN ACHIEVEMENT TESTS	32
19	MEAN PERFORMANCE ON ALL SUBTESTS OF THE METROPOLITAN ACHIEVEMENT TESTS -- GRADE 2	33
20	MEAN PERFORMANCE ON ALL SUBTESTS OF THE METROPOLITAN ACHIEVEMENT TESTS -- GRADE 3	35
21	MEAN PERFORMANCE ON ALL SUBTESTS OF THE METROPOLITAN ACHIEVEMENT TESTS -- GRADE 4	35
22	MEAN PERFORMANCE ON ALL SUBTESTS OF THE METROPOLITAN ACHIEVEMENT TESTS -- GRADE 5	36
23	MEAN PERFORMANCE ON ALL SUBTESTS OF THE METROPOLITAN ACHIEVEMENT TESTS -- GRADE 6	37
24	MEAN PERFORMANCE ON ALL SUBTESTS OF THE METROPOLITAN ACHIEVEMENT TESTS -- GRADE 7	39
25	PER CENT OF PUPILS GAINING SIX MONTHS OR MORE IN ACHIEVEMENT	39
26	PER CENT OF ATTENDANCE	41
27	COST ANALYSIS OF READING GAINS BY GRADES	42

I. INTRODUCTION

The instructional program at the Ralph C. Robinson Elementary School has made use of many services and resources to develop programs specifically aimed at satisfying the identified needs of individual pupils. Services and resources available were provided through the Title I Program, the Comprehensive Instructional Program (CIP), and the Emergency School Assistance Program.

The main thrust of the instructional program was directed toward increasing the reading skills of pupils in the primary grades. Since those activities resulting from special support programs were integrated with the regular school program, all services and resources became a part of the regular instructional program and were aimed at satisfying the specific identified needs of the disadvantaged pupils.

II. RATIONALE

In order to be eligible for Title I funds, the per cent of deprivation at Robinson Elementary School had to be at least 14 per cent. A survey of all families with children attending Robinson revealed that 32 per cent of the pupils came from families having a yearly income of $2,000 or less.

The Ralph C. Robinson Elementary School is located on the northeast side of the Herman E. Perry Homes Community. It had an active enrollment of approximately 442 pupils and is one of three elementary schools serving nearly 1,100 families who are housed in the Perry Homes Apartments.

The Perry Homes Community is one of Atlanta's largest housing projects. It was designed for low income families. Being this kind of community, it lacks many of the resources that are necessary to provide a climate for creative and successful learning experiences. For these reasons, federal funds from Title I are made available to be used to strengthen the existing instructional program by providing instructional services and resources. These are designed to improve the competencies of pupils and to help them become more positive and effective individuals. Robinson also received

federal funds from the Emergency School Assistance Program in an attempt to attack some of the school's desegregation problems. Locally, the Comprehensive Instructional Program provided services for Robinson in an effort to raise the reading levels of pupils in grades 1 through 3.

III. NEEDS ASSESSMENT

The combined efforts of the three special assistance programs given were aimed at satisfying the identified needs of the pupils at Robinson School. Needs were assessed using diagnostic instruments* and informal community surveys. Those needs identified included the following:

A. To develop the desire and ability to assume an increasing responsibility for learning

B. To develop a more positive self-image

C. To develop a sound pattern of behavior which will be acceptable in a democratic society

D. To develop communicative skills which will reflect an expanding vocabulary

E. To develop basic reading skills that lead to independence in reading

F. To develop a better understanding of reading as a tool for creativity and exploration.

IV. GOALS OF THE INSTRUCTIONAL PROGRAM

Activities of the instructional program were primarily coordinated through activities of the lead teacher. Duties of the lead teacher, as defined later, were all directed toward satisfying those identified needs of the pupils. To satisfy the needs, specific goals were set. These goals

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* See baseline data, page 9.

may be thought of as goals of the Lead Teacher Program at Robinson and included the following:

A. To provide a reading program which is aimed at developing those reading skills that will lead to independence in reading -- including those skills relating to comprehension, word attack, and vocabulary

B. To provide suggestive techniques and procedures designed to improve the school's reading program

C. To develop an instructional program which is designed to assess pupils' progress through continuous diagnostic procedures

D. To provide assistance to teachers and pupils toward bridging the communication gap between pupils and teachers through an experience-based curriculum.

V. PERFORMANCE OBJECTIVES

The behaviorally written objectives were developed using performance measures and indicators of expected outcomes. Objectives were written to relate directly to the goals and needs of the pupils. Included were the following:

A. Eighty per cent of the pupils enrolled in grades 1 through 5 will increase their reading skills at a rate of one month's gain per one month's instruction. Gains will be measured by the Newman's Independent Reading, Writing, and Research Ability Analysis.

B. Seventy-five per cent of the 448 pupils enrolled in grades 2 through 7 will increase their reading skills at a rate of one month's gain after one month's instruction. Gains will be determined by using the Metropolitan Achievement Tests.

C. Fifty per cent of the pupils enrolled in grades 2 through 7 will gain at least one month per month in achievement between pretests and posttests of the Metropolitan Achievement Tests.

D. All pupils will increase their attendance so that the per cent of attendance for the 1970-71 school year will indicate at least a 1.5 per cent improvement over the 1969-70 school year.

VI. SUPPORTING PROGRAMS AND GOALS

As given earlier, there are three different programs that provided services at the Robinson Elementary School. Each program had specified goals which were associated with the goals of the instructional program at the school.

Title I Program

In schools in Atlanta where disadvantaged youths make up at least 14 per cent of the total school population, federal assistance through the Title I grant is available to provide supplementary services and resources to the regular school program. The 1970 survey of pupils enrolled at Robinson showed that of the total 489 pupils enrolled at the end of the 1969-70 school year, 156 were from low-income families. This is 32 per cent or more than twice the per cent of deprivation necessary to qualify Robinson for federal assistance through Title I. Robinson has focused attention on one of the goals set by Title I. That one goal is:

> To raise the achievement level of selected disadvantaged pupils so that they will show significant differences at the .05 level between pretests and posttests in word knowledge, auditory discrimination, language usage, pronunciation, comprehension, word recognition, social studies, and arithmetic.

Title I provided funds for personnel and services. Funds for services included those for materials, supplies, and equipment. Personnel hired and their duties included the following:

A. One Lead Teacher

B. Two Educational Aides

C. One Attendance Aide

D. One Social Worker (part-time).

A. Lead Teacher

A Lead Teacher Program was developed at Robinson and operated through the guidance and coordination efforts of the lead teacher. Activities in the program included independent reading, writing, and research analyses which were used to develop diagnostic procedures. Its prime objective was that of developing a systematic program in reading aimed at improving the reading skills of pupils in grades 1 through 5. The lead teacher performed the following duties as they related to the goal previously mentioned and to reaching the goals of the school:

1. Helped to plan and organize the total instructional program with emphasis on reading
2. Coordinated the CIP activities at Robinson School
3. Served as a resource person for teachers, pupils, and parents
4. Assisted teachers in diagnosing and prescribing for classes, groups, and individuals
5. Taught groups of children and/or individual pupils (outside of their classrooms) who needed special help or specific reading skills
6. Demonstrated techniques of teaching in classrooms and to entire faculty
7. Assisted teachers and aides in selecting and making appropriate games and materials for teaching and re-enforcing specific reading skills
8. Ordered textbooks and related materials for school
9. Assisted librarian in the selection of books and nonprint materials for entire school
10. Coordinated the school-wide testing program, including developmental and CIP tests.

11. Assisted in the orientation of new teachers by:

(a) Interpreting the school's policies and procedures as related to instruction

(b) Displaying and demonstrating the use of available materials and equipment

(c) Helping with classroom organization and planning.

B. Educational Aides

Two educational aides were assigned to work in educational teams. Their specific duties included:

1. Assisting with reports that pertained to classroom activities

2. Assisting in providing supplementary materials and services for classroom activities

3. Performing duplication services for teachers who were involved in the reading program

4. Assisting with library and game activities as they related to the reading program

5. Assisting teachers by providing individualized and tutorial help for referred pupils.

C. Attendance Aide

One attendance aide was assigned duties regarding the improvement of attendance. The specific duties performed by the attendance aide were:

1. Assisting with reports in office regarding absences under guidance of social worker

2. Assisting in making home visitations regarding absences under guidance of social worker

3. Conferring with parents concerning excessive absences of pupils at school and during home visits

4. Making follow-up reports to principal and social worker on status of absentees.

D. Social Worker

A social worker was available on a part-time basis to work closely with teachers, aides, and parents. The social worker operated from the area office and had specific duties to perform at Robinson. These included:

1. Contacting parents regarding children's problems concerned with poor attendance, economic needs, physical conditions, and academic difficulty
2. Assisting in obtaining services from community agencies
3. Serving as a liaison between the school, home, and community.

Comprehensive Instructional Program (CIP)

The Comprehensive Instructional Program is funded locally and supplies schools with funds upon request for obtaining materials necessary for the implementation of their reading programs. Its services for this year were limited to grades 1 through 3 which included approximately 194 pupils at Robinson. Its aim was to provide continuous assessment tests for pupils so that teachers could determine their progress. CIP provided the services of resource personnel who worked cooperatively with the lead teacher during the implementation of its related program activities. CIP's goal for the year was:

> To insure gain for each pupil in grades 1-3 through diagnostic teaching and in-service teacher training.

Emergency School Assistance Program (ESAP)

The Emergency School Assistance Program is a federal program designed to attack problems resulting from desegregation. It provided funds for schools in order to help design school programs that result in activities aimed at attacking specific problems which were unique to a particular school. Robinson designed such a program. It was aimed at "removing the inter-pupil-teacher attitudes of rejection and suspicion." The planning of the ESAP proposal for Robinson involved administrators, teachers, pupils, and community personnel. It was the belief of these planners that the inter-pupil-teacher attitudes of rejection and suspicion stem from low academic

achievement levels of pupils, negative self-images of pupils, fear and negative attitudes of transferred white teachers toward working with black low achievers, and lack of teacher-pupil rapport. The strategy for meeting these problems was given as the implementation of a more social or experience-based curriculum so that needs could be met through a language experience-industrial arts program which would provide opportunities for necessary psychological and social adjustments of teachers and pupils.

VII. INSTRUCTIONAL PROGRAM

The instructional program incorporated the resources and assistance provided through Title I, CIP, and ESAP to furnish the means for more productive learning situations. These resources were made useful before and after levels of instruction were organized early in September of 1970. The levels were organized after the University of Georgia Reading Clinic, Form 7, had been used to administer an informal reading inventory to pupils in grades 6 and 7 and the Robert E. Newman Reading and Ability Task Performance had been administered to pupils in grades 1 through 5. Pupils were taught in self-contained classes with the exception of a first grade team. Pupils were grouped by reading levels within each classroom.

The Scott-Foresman series were used as the basal textbook in reading with supplementary programs in some classes. The Sullivan Programmed Reader was used in a combination third and fourth grade class with 26 children involved. The reading levels in this class ranged from grade 1 to grade 5.

In a sixth grade class in which reading levels ranged from grades 1 to 5, the Science Research Associates Reading Laboratory and Webster's Classroom Reading Clinic were used supplementary to the basal reader series by Scott-Foresman.

The Webster's Classrooom Reading Clinic also was used as a supplementary tool with 14 seventh graders who scored below 3.0 grade level. Baseline measures to be used to show gains were obtained through testing using the Metropolitan Achievement Test.

At the beginning of the school year, the lead teacher worked directly with the first grade teachers in diagnosing pupils' needs and prescribing courses based upon those needs. An instructional team made up of two first grade teachers, a music teacher, two instructional aides, and the lead teacher was developed and worked closely with 51 identified low achievers. Behavioral objectives were developed by the team to indicate goals and intentions centered around that of insuring a month's gain per month in basic reading skills.

Ten children with reading difficulties were selected from the second grade class to work directly under the direction of the lead teacher during the second semester.

Baseline Data

Data for baseline measures were obtained by administering several instruments that indicated areas of weaknesses in reading and achievement. Also used were instruments designed to give pre/post measures of achievement. A list of all administered instruments is as follows:

Instruments	City Wide	School Wide	Grade	Diag-nostic	Pre-test	Post-test	Popula-tion
Metropolitan Readiness Tests - Form A	x	..	1	..	x	..	All
Metropolitan Achievement Tests - Form F	x	..	1	..	..	x	All
Form F	x	..	2	..	x	..	All
Form G	x	..	2	..	..	x	All
Form H	x	..	3	..	x	..	All
Form G	x	..	3	..	..	x	All
Form A (Elem.)	x	..	4	..	x	..	All
Form AM	x	..	5	..	x	..	All
Form BM	x	..	6	..	x	..	All
Form AM (Adv.)	x	..	7	..	x	..	All
Form C	x	..	4	..	..	x	All
Form CM	x	..	5	..	..	x	All
Form DM	x	..	6	..	..	x	All
Form CM	x	..	7	..	..	x	All
CIP Test	..	x	1-3	..	x	..	All
Newman's Analysis Inventory	..	x	1	x	x	x	51
	..	x	2	x	x	x	52
	..	x	3	x	x	x	60
	..	x	4	x	x	x	59
	..	x	5	x	x	x	24

VIII. MANAGEMENT EVALUATION

The evaluation of the management process includes an evaluation of the managerial functions associated with all special programs and related to management and control, process, diagnosis, communication, dissemination, and cost effectiveness.

Management and Control

The management and control functions of program activities are looked at in terms of aspects of program operation. These include:

A. The availability of advance information

B. The availability of materials and supplies

C. Whether the needs of the pupils were determined early during the program operation and made available for program assessment

D. Those recruiting and staffing problems and whether they were solved on time

E. The degree to which the program was operated in isolation as compared to being operated as a part of the total involvement

F. Whether program goals and behavioral objectives were written at the beginning of the program operation and made available for program assessment

G. The effectiveness of educational aides as related to their expected performances.

The availability of advance information regarding program operation as a tool for successful program monitoring is necessary for continuous evaluation and review. Information regarding program operation was made readily available upon requests for school monitoring by the administrative staff, including the lead teacher at Robinson School. It may be noted that such cooperation made it possible for a rather comprehensive coverage of school programs and their operation for the school prospectus. The school prospectus served as a means for disseminating facts of school efforts as designated by its program design.

A second aspect of program operation has to do with probelems encountered during recruiting and staffing activities. The information received regarding these aspects suggests that there were no problems encountered during these activities. It further suggests that the absence of recruiting and staffing problems was probably a result of the surplus of elementary school teachers who are available for hire in the Atlanta area. A breakdown of assigned staff and the pupil-teacher ratio are as follows:

Personnel	Grades	Numbers	Funds
Principal (full-time)	Adm.	1	General
Regular Classroom (full-time teachers)	1-7	16	General
Lead Teacher	1-7	1	Title I
Librarian	1-7	1	General
Social Worker (part-time)	1-7	1	Title I
Educational Aide	1-7	3	Title I
Band Teacher	1-7	1	General
Music Teacher (part-time)	1-7	1	General
Physical Education Teacher	1-7	1	General
Speech Teacher (part-time)	1-7	1	General

There were 16 full-time teachers at Robinson during the 1970-71 school year. The average pupil-teacher ratio was 27:1.

Monitoring of program activities at Robinson school did not begin until during the month of February. This was due to the assignment of a new Research Assistant whose duties included the monitoring of program activities at Robinson. From February to the end of the school year in June, there were no reports made regarding materials and supplies not being made readily available. An expenditure report of general and project funds shows that there were no outstanding purchases of materials and supplies which were ordered from special project funds. There was a balance of $900.37 from general funds for textbooks and school supplies as of June 30, 1971. It may be noted, however, that the amount actually spent and the amount allotted for textbooks and school supplies differed by approximately $225. This is much less than the $900.37 outstanding purchase. In other words,

the amount of the purchase which was not received would have placed the total expenditures for textbooks and school supplies approximately $675 above that which was allotted. The nature of the $900.37 outstanding purchase was not determined.

The average active enrollment for the year at Robinson was 442 pupils. At a total school operation cost of $283,445.40, the operation cost per pupil was approximately $641.

The instructional program at the school was supported by many special services as indicated earlier in this report. All special and supporting programs were a part of the total involvement. None, therefore, operated in isolation. All services were geared toward alleviating those identified needs of the pupils and accomplishing the goals of the school's instructional program. This can be clearly seen through a review of the goals of the special programs (Section VI).

Needs of pupils were identified early during the school year. Community involvement, parent involvement, and teacher diagnosis were given as the processes through which the pupils' needs were identified. A review of the chart on baseline data in Section VII indicates which instruments were administered to assess pupils' needs. Based on the identified needs, the instructional program was designed to meet and alleviate the needs of the pupils. The response to making needs, goals, and objectives available for program review was excellent. Promptly after the request, these were made available. The availability of the needs, goals, and objectives initiated monitoring activities at the school.

From the structure of the instructional program, it seems that needed resources were available to adequately provide the intended services. Administrative procedures and concerns are evidences that the goals and objectives of the instructional program were vigorously pursued. Among others, one factor leading to this conclusion is that involving the support of the faculty at the school. Their support involved writing enabling objectives at intervals during the school year. These objectives, which were behaviorally stated and included performance criteria, were used as supporting and short-ranged objectives. They were designed to accomplish the goals and objectives of the instructional program.

SCHOOL OPERATING COSTS

7/1/70 --- 6/30/71

Fund Source	Allocation	Outstanding Amounts	Expenditures Salary	Non-Salary	Expenditures
General Funds					
Salaries (Regular)	$ 0	$ 0	$198,458.70	$ 0	$198,458.80
Textbooks and School Supplies	6,626.68	900.37	0	6,399.10	6,399.10
Plant Operation	0	0	22,582.13	6,537.54	29,119.67
Maintenance and Repair	241.50	85.00	6,531.78	4,033.43	10,565.21
Equipment	483.00	51.82	0	2,044.42	2,004.42
CIP Salaries	0	0	1,931.80	0	1,931.80
Material and Supplies	0	257.28	0	0	0
Subtotal . . .	$7,351.18	$1,294.47	$229,504.41	$18,974.49	$248,478.90
Special Project Funds					
ESAP					
Salaries	$ 0	$ 0	$ 1,047.60	$ 0	$ 1,047.60
Materials and Supplies	0	0	0	356.99	356.99
Title I					
Salaries	0	0	33,421.26	0	33,421.26
Materials and Supplies	0	0	0	140.65	140.65
Subtotal . . .	$ 0	$ 0	$ 34,468.86	$ 497.64	$ 34,966.60
GRAND TOTAL	$7,351.18	$1,294.47	$263,973.27	$19,472.13	$283,445.40

Process

A second phase of successful program operation has to do with the linearity within the program. When organizing the program, it seems that the sequence needs-goals-objectives was considered. Upon examining the needs and goals of the instructional program, and comparing the same, it is obvious that there is linearity between the two. Each need has been recognized by a set goal. Likewise, each goal has been recognized by at least one behavioral objective. This has been covered to some extent in an earlier section of this report. Whether or not these goals were satisfactorily achieved is dependent upon whether their related objectives were met. This, of course, can be found in the section on Product Evaluation.

Data concerned with the characteristics of the pupils being served were gathered and have been included throughout this report. These data show that pupils who were served by special programs included those identified by the criteria defined by Title I. These criteria specify that those schools receiving funds through Title I should include among its population 14 per cent of the total pupils attending who come from homes where families' incomes are $2,000 or less.

IX. PRODUCT EVALUATION

Product evaluation is concerned with whether or not the goals and objectives of the instructional program were reached. Goals should be directly related to the needs of the pupils and behavioral objectives should be directly related to those set goals. These linear relationships are reported. The degree to which each behavioral objective was reached as compared to the expected performance set by each objective is also reported. The level of attainment for program objectives is based on a pre-post design and makes use of descriptive statistics from pre and post measures of the identified variables. Also included in some cases are analyses of variances and *t* tests for paired observations which are used to point out the significance of any change between pre and post measures.

Since comparable tests for pre and post measures were not administered to pupils of grade 1, a direct comparison between pre and post scores of the Metropolitan Readiness Tests (MRT) and the Metropolitan Achievement Tests (MAT) is not possible. However, descriptive statistics are given for both tests (Tables 1 and 2) and an attempt to compare performances indicated by the two tests has been made by preparing tables of ratings for the per cent of pupils who fall in each of five categories for the two tests. Group performances are given consisting of all pupils who completed all subtests for both the MRT and the MAT tests. Pupils are not matched between tests; thus, the same pupils who are reported as the group completing all subtests on the MRT are not necessarily the same pupils comprising the group whose performances are reported for the MAT. A hopeful conclusion to be made by including such statistics is that fewer pupils will perform average and below on the MAT (posttest) than on the MRT (pretest) where the average ratings for both the MRT and MAT are denoted as average. Low normal on the MRT is comparable to below average on the MAT, and low on the MRT is comparable to poor on the MAT. Examining the data as recorded in both tables, one can see that the per cent of pupils who were rated average, below average, and poor on the MAT posttests was actually greater than that referring to those who were rated average, low normal, and low on the MRT pretest. Between ninety to one hundred per cent of all pupils were rated average and lower on each subtest of the MAT. Distributions for each subtest are asymmetrical and the larger frequencies tend to be concentrated toward the low end of the stanine interval. Smaller frequencies are toward the high end. For all subtests, distributions are positively skewed.

Data included in Table 1 (MRT Pretest) show that from seventy to ninety per cent of all pupils were rated average and lower on each subtest. A fairly normal distribution exists for the Listening subtest even though it is somewhat positively skewed. All other subtests of the MRT are positively skewed. As can be seen, the degree of skewness of the pretest scores is less than that of the posttest scores. Ten to thirty per cent of the pupils taking the MRT pretest were rated high normal and superior. On the other hand, six to ten per cent of the pupils were rated above average on the MAT posttest (comparable to high normal on the MRT) and none were rated superior on the posttest.

TABLE 1

LETTER RATING AND READINESS STATUS CORRESPONDING
TO PER CENT OF PUPILS IN EACH CATEGORY
GRADE ONE

Letter Rating	Word Meaning	Listening	Matching	Alphabet	Numbers	Copying	Total Test
A	0	6	2	14	6	6	6
B	10	24	12	14	16	14	16
C	26	34	40	38	32	26	32
D	56	32	42	24	40	42	32
E	8	4	4	10	6	12	14

Readiness Status: A=Superior, B=High Normal, C=Average, D=Low Normal, and E=Low.

Note: Statistics based on raw scores for 50 pupils. Readiness Status taken from the Metropolitan Readiness Tests Manual of Directions.

TABLE 2
RATINGS FOR PUPILS PERFORMANCE AND THE PER CENT OF PUPILS IN
EACH CATEGORY OF THE METROPOLITAN ACHIEVEMENT TESTS
GRADE ONE

Stanine Values	Ratings	Word Knowledge	Word Analysis	Reading	Total Reading	Total Math
9	Superior	0	0	0	0	0
7-8	Above Average	8	0	10	6	0
4-6	Average	55	31	73	61	41
2-3	Below Average	31	61	17	31	49
1	Poor	6	8	0	2	10

Note: Statistics based on stanine values for 51 pupils. Recommended ratings with corresponding stanine values taken from Teacher's Handbook, Metropolitan Achievement Tests, Primary I.

As indicated earlier, there is no direct comparison between the MRT and the MAT tests. The five ratings assigned to both tests are not equally weighted. Those ratings assigned to the MRT are based on raw scores whereas those of the MAT are based on percentile and stanine ranks. However, it is recommended

that teachers may look at the performances of their groups comparatively to that of the norm group. Tables 1 and 2, therefore, have separated pupils according to their performances as set by the norm group.

Descriptive Data

Group data are provided in Tables 3 and 4 for the MRT pretests and the MAT posttests. Descriptive statistics given include the mean raw score, variance, and mean letter rating for each subtest on the MRT. Statistics for the MAT include the mean grade equivalent (GE), variance, mean stanine and mean rating for each subtest. Pupils are paired between pretest and posttest. Data are included for all pupils who completed all subtests on the MRT for the pretest. Likewise, data are included for all pupils who completed all subtests of the MRT for the pretest. Likewise, data are included for all pupils who completed all subtests of the MAT for the posttest. Out of a total of 51 pupils who took some or all of the MRT subtests and a total of 50 pupils who took some or all of the MAT subtests, 42 of the same pupils completed all subtests on both the MRT and MAT tests. Data provided, therefore, are for matched pupils; for instance, a James Smith who completed all subtests on the MRT also completed all subtests on the MAT.

Data from Table 3 show that the average pupil was rated average in performance, as compared to the norm group, on all subtests except the subtest Word Meaning where the average pupil performed below average. The average total score which indicates the average total performance for the group was rated "C" or average.

TABLE 3

GROUP DATA FOR THE METROPOLITAN READINESS TESTS
GRADE ONE -- N = 42

	Word Meaning	Listening	Matching	Alphabet	Numbers	Copying	Total Test
Highest Possible Score	16	16	14	16	26	14	102
Mean Raw Score	6.6	9.7	6.4	9.4	10.2	5.5	48.1
Variance	6.8	8.2	12.2	24.6	21.2	15.2	351.4
Mean Letter Rating	D (Low Normal)	C (Average)	C (Average)	C (Average)	C (Average)	C (Average)	C (Average)

Note: Statistics are from raw scores.

As an indicator of variability, variances are included for all subtests. Their only use here, however, may be that of comparing the variability of scores on subtests having equal score ranges. Therefore, a true comparison of variability may only be made between Word Meaning, Listening, and Alphabet where the variances were respectively, 6.8, 8.2, and 24.6. As indicated by the large variance for the Alphabet subtest, scores were spread throughout the score range of 0-16 much more than scores for the Word Meaning and Listening subtests. This, of course, indicates that the pupils of the group were not homogeneous in their knowledge of the alphabets when compared to their performances in word meaning and listening. A fair comparison may be made between the Matching and Copying subtests, each of which had a score range of 0-14. Their variances are respectively 12.2 and 15.2, which are not significantly different. Therefore, according to the data, pupils' scores varied more on the Alphabet subtest than on any of the other five subtests.

Data from Table 4 show that for measures of central tendency, performances for subtests in word knowledge, reading, and total reading were rated average. Mean scores show an average gain of six months or more for each subtest; assuming of course, that the average beginning grade equivalent was near 1.0. That period between pretest and posttest was approximately six months.

TABLE 4

GROUP DATA FOR THE METROPOLITAN ACHIEVEMENT TESTS
GRADE ONE -- N = 42

	Word Knowledge	Word Analysis	Reading	Total Reading	Total Math
Mean GE	1.66	1.39	1.69	1.70	1.53
Variance	.129	.063	.091	0.82	.165
Mean Stanine	4.17	3.00	4.45	4.14	3.35
Mean Rating	Average	Below Average	Average	Average	Below Average

Score ranges which are expressed in grade equivalents are equal for all subtests. Variances, therefore, are comparable between subtests. Hence, scores varied least for the Word Analysis subtest and were more spread out for the Total Math subtest. Pupils' gains in Total Math, however, were almost average. Gains averaged more than five months.

Class Comparisons

Another approach has been taken to assess the posttest performance of the first grade group. This involves using the MRT total test score as a predictor score or "readiness status." The method taken considers all subtests of the MAT and relates performances of each of the two classes of grade 1. In doing this, one-way analyses of variances were computed for each subtest where each of the two classes was taken as a separate sample of the first grade group. The two teaching methods, or teaching styles, may be considered as treatments. One must understand, however, that the two teaching methods were not designed as such but were no more than variable differences in teaching styles imposed by different teachers. Since pupils were grouped according to their readiness status, an analysis of variance will also give some idea of the effect of instruction during the period between testing. Thus, if a number of pupils scored less on the MRT than others and was accordingly grouped as a slower section, or class, but gained more as indicated by the posttest than the other class or classes, one can only assume that the instructional program for this class was more effective than that of the other class.

A baseline of performance was determined for each class of the first grade group. This was done by analyzing data obtained through the administering of the MRT. Data included in Table 5 for the MRT are based on the pre and post performances of 42 pupils who completed all subtests for both the MAT and MRT. An analysis of variance has revealed for matched respondents sample statistics and a complete analysis of variance table.

Data from the analysis of variance table for the MRT are recommended to be used as indicators of the readiness status of each of the two classes. Data may also be used to infer the relative performances of the two classes on the MAT.

TABLE 5

ANALYSIS OF VARIANCE OF PERFORMANCES FOR TWO GROUPS OF A TOTAL OF 42 PUPILS AS MEASURED BY THE METROPOLITAN READINESS TESTS

Class	Sample Size	Mean	Variance	Standard Deviation	Standard Error
1	22	50.5	261.88	16.18	3.45
2	20	45.5	454.78	21.22	4.77
Pooled Sample	42	48.0	351.41	18.75	2.89

ANALYSIS OF VARIANCE

Source	DF	SS	MS	F
Between	1	267.63	267.63	.7571
Within	40	14,140.30	353.51	
Total	41	14,407.93		

Standard Deviation of Error = 18.8018.

For all analyses of variances as methods of analyses which are included in this report, the approach and rationale behind the method is conceptually similar to that of a t test. They both are tests of significance between group means. In the case of analysis of variance, the significance of the difference between two or more means may be tested. An underlying difference that exists between the two is, of course, that the analysis of variance uses variances entirely instead of using actual difference-standard errors even though the actual difference-standard error reasoning is behind the method. Two variances are always pitted against each other. One variance, that presumably due to the treatment variable, is pitted against another variance, that presumably due to error of randomness.

An examination of the data from Table 5 shows that the means for classes 1 and 2 are fairly equal. They differ by only 5.0 points and are both close to the mean of 48.0. A look at the variability of scores indicates that the scores for class 2 were spread out more than those for class 1 as shown by the variances of 261.88 and 454.78. These are variances for classes 1 and 2, respectively.

The mean square (MS) is given as an estimate of the variance and is in two parts; that between groups and that within groups. Thus, in the case with the MRT, the between and within groups mean squares, or variance estimates, of 267.63 and 353.51 respectively did not differ significantly. This of course, is indicated by a nonsignificant F of .7571.

According to the MRT, class 1 and class 2 did not differ significantly in their performances on the readiness test. Their performances did differ slightly, however, in that class 1's total score was greater than class 2's by 5.0 points. A prediction may follow and inferences may be made regarding the two classes' performances on the MAT. It could be that the readiness status of the first grade group has adequate influence in determining the performance of the group. If this is the case then class 1 is expected to perform slightly, but not significantly, better than class 2. On the other hand, if the impact of the instructional program has had more effect on either of the two classes, their comparative performances could differ significantly.

Data in Tables 6 through 10 include one-way analyses of variances that were computed for all subtests on the MAT using grade equivalents. These data are from post measures of the MAT and are based on the same 42 pupils who completed all subtests of the MRT. The pupils also completed all subtests of the MAT.

The prediction that class 1 should perform better than class 2 was not supported by class performances on the Word Knowledge subtest (Table 6). Class 2 performed slightly better than class 1. The difference in performances was not significant. The F-ratio was .682. Scores did vary more for class 2 as was the case for scores for class 2 on the Metropolitan Readiness Tests.

As was the case with the total Metropolitan Readiness Tests score, class 1's mean as shown in Table 7 was the higher of the two classes. The difference between the two means, however, is not significant. Correspondingly, class 1's variance was less than class 2's as was the case with the Metropolitan Readiness Tests.

TABLE 6

ANALYSIS OF VARIANCE OF PERFORMANCES FOR TWO GRADE 1 CLASSES ON SUBTEST WORD KNOWLEDGE OF THE METROPOLITAN ACHIEVEMENT TESTS

Class	Sample Size	Mean	Variance	Standard Deviation	Standard Error
1	22	1.62	.082	.286	.061
2	20	1.71	.183	.428	.096
Pooled Sample	42	1.66	.129	.359	.055

ANALYSIS OF VARIANCE

Source	DF	SS	MS	F
Between	1	.088	.088	.682
Within	40	5.190	.130	
Total	41	5.278		

Standard Deviation of Error = .3602.

TABLE 7

ANALYSIS OF VARIANCE OF PERFORMANCES FOR TWO GRADE 1 CLASSES ON SUBTEST WORD ANALYSIS OF THE METROPOLITAN ACHIEVEMENT TESTS

Class	Sample Size	Mean	Variance	Standard Deviation	Standard Error
1	22	1.41	.046	.214	.046
2	20	1.37	.085	.292	.065
Pooled Sample	42	1.39	.063	.251	.039

ANALYSIS OF VARIANCE

Source	DF	SS	MS	F
Between	1	.012	.012	.190
Within	40	1.576	.064	
Total	41	2.588		

Standard Deviation of Error = .2538.

A highly significant difference exists between the means of the two classes for the Reading subtest (Table 8). The difference between the mean is .29 or approximately three months difference in performance. This is contrary to the prediction, and a highly significant F ratio of 11.848 is probably attributed to the effects of the teacher's instructional program. As is shown, the greater variance is that between groups where the variance estimate is given as .854.

TABLE 8

ANALYSIS OF VARIANCE OF PERFORMANCES FOR TWO GRADE 1 CLASSES ON SUBTEST READING OF THE METROPOLITAN ACHIEVEMENT TESTS

Class	Sample Size	Mean	Variance	Standard Deviation	Standard Error
1	22	1.55	.023	.150	.032
2	20	1.84	.013	.356	.080
Pooled Sample	42	1.69	.091	.302	.047

ANALYSIS OF VARIANCE

Source	DF	SS	MS	F
Between	1	.854	.854	11.848
Within	40	2.881	.072	
Total	41	3.735		

Standard Deviation of Error = .2685.

A significant difference exists between the means of the total reading scores of the two classes (Table 9). Class 2 again performed better than class 1. Variances, however, were in accordance to those of the MRT. Class 2's variance was higher than class 1's. Most of the group variance is attributed to that between classes.

TABLE 9

ANALYSIS OF VARIANCE OF PERFORMANCES FOR TWO GRADE 1 CLASSES ON SUBTEST TOTAL READING OF THE METROPOLITAN ACHIEVEMENT TESTS

Class	Sample Size	Mean	Variance	Standard Deviation	Standard Error
1	22	1.62	.028	.169	.036
2	20	1.80	.129	.359	.080
Pooled Sample	42	1.71	.082	.286	.044

ANALYSIS OF VARIANCE

Source	DF	SS	MS	F
Between	1	.311	.311	4.082
Within	40	3.048	.076	
Total	41	3.359		

Standard Deviation of Error = .2762.

Table 10 shows that both of the two classes performed slightly below average on the Total Math subtest. Both class means were 1.53. A highly nonsignificant F ratio of .005 is given. Class 2's variance is slightly higher than class 1's. Scores varied in the same manner as those described for the total Metropolitan Readiness Tests.

It may be concluded from pupils' performances on the MAT subtests that the readiness status, as determined by the MRT did not have a significant bearing on the performance of the first grade group by classes. This conclusion is being made for the group of first graders described herein in view of their relative performances. With only two exceptions, class 2 consistently performed better on all subtests of the MAT except the Word Analysis subtest; where mean scores between the two classes differed by only .04 points, and the Total Math subtest; where mean scores were equal. Further, it may be concluded that the resulting performance of class 2 was due to a more effective teaching style since performances were not in agreement with the readiness status of each class. One must not misjudge, however, the role

that many extraneous variables play in shaping the behaviors of children. Therefore, all conclusions are made according to available and measurable data and does not include the effects of uncontrolled variables.

TABLE 10

ANALYSIS OF VARIANCE OF PERFORMANCES FOR TWO GRADE 1 CLASSES ON SUBTEST TOTAL MATH OF THE METROPOLITAN ACHIEVEMENT TESTS

Class	Sample Size	Mean	Variance	Standard Deviation	Standard Error
1	22	1.53	1.450	.381	.081
2	20	1.53	.195	.442	.099
Pooled Sample	42	1.53	..165	.406	.063

ANALYSIS OF VARIANCE

Source	DF	SS	MS	F
Between	1	.001	.001	.005
Within	40	6.749	.169	
Total	41	6.750		

Standard Deviation of Error = .411.

Objective A

Eighty per cent of the pupils enrolled in grades 1 through 5 will increase their reading skills at a rate of one month's gain per one month's instruction. Gains will be measured by the Newman's Independent Reading, Writing, and Research Ability Analysis.

The Newman's Independent Reading, Writing, and Research Ability Analysis was developed by Dr. Robert E. Newman, Syacuse University. It is a reading, writing, and research ability inventory and includes the following:

1. Basic Reading Words (learn with flashcards)
2. Sounds of Letters (learn by dictation)
3. Regular Consonants (learn with word wheels)
4. Regular Consonant Blends (learn with word wheels)

5. Common Digraphs (learn with word wheels)
6. Common Syllables (learn with word wheels)
7. Common Vowel Elements (learn with word wheels)
8. Blending (learning with word wheels)
9. Basic Spelling Words (by dictation)
10. Legible Printing or Writing
11. Communicative Printing or Writing.

The Newman's analysis inventory was administered three times. Test dates were during the months of September, February, and April. Pupils in grades 2 through 5 were tested in the first nine areas listed previously. However, test data were inconsistently gathered and were considered invalid for group inference. Therefore, data are not given for the Newman's analysis inventory.

Data were gathered by individual classroom teachers upon recommendation by the administrative staff. These data should have included measures for each pupil in each class for grades 2 through 5. These data also should have included measures for each pupil and for each test date. However, of the eight classes reporting, only three reported data continuously representative for the three test dates, for each of the nine areas, and for most of the pupils in the three classes. In most cases, data were not gathered for the September test date.

Inquiries concerning the incomplete data revealed that most teachers were not too enthusiastic about administering the inventory. They questioned the necessity of giving such a test. Consideration should be given to the fact that a data gathering instrument such as the Newman's analysis can be used diagnostically in the areas of reading, writing, and other communicative skill areas to determine weaknesses and growth. Instruments of the sort may be used at intervals to determine short interval changes in communicative skills, and data from such tests may be used to point out needed changes in existing methods and current strategies in one's classroom.

The extent to which this objective was obtained is, because of lack of data, impossible to determine. Growth in the area of reading has been determined, however, through the use of the standardized Metropolitan Achievement Tests. These data are given in the next section of this report.

Objective B

> Seventy-five per cent of the 448 pupils enrolled in grade 2 through 7 will increase their reading skills at a rate of one month's gain after one month's instruction. Gains will be determined by using the Metropolitan Achievement Tests.

This objective is directly related to needs D, E, and F. These respectively express needs to develop communicative skills, basic reading skills, and a better understanding of reading as a tool for creativity and exploration. This objective is also directly related to those goals expressing intentions of providing a reading program aimed at developing reading skills and providing techniques and procedures designed to improve the reading program.

The goal statement in Objective B is that of increasing the reading skills of pupils in grades 2 through 7. The expected performance was set at an increase of one month's gain during one month's instruction. The performance criteria also specify that seventy-five per cent of the pupils would increase their reading skills at a rate of one month per month between pre and post administerings of the MAT.

Data has shown that a total of 59 pupils took part or all of the subtests administered for the pretest for grade 2. Also, a total of 52 pupils took part or all of the subtests administered for the posttest for grade 2. Of these, only 26 pupils completed all subtests on both the MAT pretest and posttest. All pupils, less the 26 included, were either absent during the pre or post sitting, or their names did not appear on the roster of pupils taking either the pretest or posttest. In the latter case, pupils were reported not being enrolled at the school during testing. This same reason is given for all subsequent grades being included in this report.

Findings in Table 11 include data from reading scores for the 26 second grade pupils matched on pretest and posttest and completing all subtests. Data show that the highest average gain was recorded in word knowledge as .40 or a gain of four months. The average gain in total reading is .32 or slightly more than one-half the anticipated gain as specified in the objective. There were approximately six months of instruction time between pretest and posttest. Gains, therefore, should average about six months. These are normal gains and were expected to occur between testings. Results,

however, show that the expected goals were not reached. Only 16 per cent of the pupils paired between tests gained six months or more.

TABLE 11

MEAN PERFORMANCE FOR GRADE 2 IN READING AREAS AS INDICATED BY THE METROPOLITAN ACHIEVEMENT TESTS

Subtest	Pretest	Posttest	Gain
Word Knowledge	1.38	1.78	.40
Reading	1.20	1.50	.30
Total Reading	1.33	1.65	.32

Class comparisons for grade 2, using the analysis of variance technique, (Table 12) has shown that class 1 and class 2 performed significantly different on the Total Reading subtest. The average gain for class 1 is given as .17, or approximately two months, and that for class 2 is given as .50, or five months. The variance estimate, or mean square (MS) is greater for the between group estimate rather than the within group estimate. A resulting F ratio of 7.512 indicates a significant difference between the performances of the two classes. Scores for class 1 show a more homogenous scoring pattern when compared to class 2. Variances for classes 1 and 2 were respectively .015 and .185. The analysis of variance is included for grade 2 because improving reading skills is a primary objective of compensatory education programs for grades 1 through 3.

Data for grade 3, Table 13, for subtests in the reading areas show that the highest average gain was again recorded in word knowledge. This average gain was .54 or slightly more than five months. Less than one month's gain occurred between pretest and posttest in reading. The average gain in total reading was .27 or less than three months. The goal as set by the objective was not reached. Only 31 per cent of all pupils in grade 3 increased their total reading scores by .60 or six months.

TABLE 12

ANALYSIS OF VARIANCE OF PERFORMANCES FOR TWO GRADE 2 CLASSES ON SUBTEST TOTAL READING OF THE METROPOLITAN ACHIEVEMENT TESTS

Class	Sample Size	Mean Gain	Variance
1	14	.17	.015
2	12	.50	.185
Pooled Sample	26	.32	.117

ANALYSIS OF VARIANCE

Source	DF	SS	MS	F
Between	1	.698	.698	7.512*
Within	24	2.229	.093	
Total	41	2.927		

Standard Deviation of Error = .305.

* Significant at the .05 level.

TABLE 13

MEAN PERFORMANCE FOR GRADE 3 IN READING AREAS AS INDICATED BY THE METROPOLITAN ACHIEVEMENT TESTS

Subtest	Pretest	Posttest	Gain
Word Knowledge	1.87	2.41	.54
Reading	1.90	1.95	.05
Total Reading	1.88	2.15	.27

Class comparisons for grade 3, Table 14, again using the analysis of variance technique, has shown that class 1 performed better on the pretest than on the posttest with results of a negative average gain. The performance of class 2 is about average with a recorded gain of .58 or approximately six months. The greater variance is attributed to that between groups where the variance estimate is given as 2.233. Class performances are significantly different as indicated by the F ratio of 21.002.

TABLE 14

ANALYSIS OF VARIANCE OF PERFORMANCES FOR TWO GRADE 3 CLASSES ON SUBTEST TOTAL READING OF THE METROPOLITAN ACHIEVEMENT TESTS

Class	Sample Size	Mean Gain	Variance
1	10	-.03	.065
2	15	.58	.113
Pooled Sample	25	.27	.195

ANALYSIS OF VARIANCE

Source	DF	SS	MS	F
Between	1	2.233	2.233	21.002**
Within	24	2.445	.106	
Total	25	4.678		

Standard Deviation of Error = .326.

** Significant at the .01 level.

Data for grade 4, Table 15, for subtests in the reading areas, show that the average gain between pretest and posttest reading scores was slightly above normal for the sample included. This average gain is computed as .65 or more than six months. Gains in word knowledge averaged .45 or less than five months. Total reading scores for grades above grade 2 are not computed from data sheets. Also, data from total reading scores are not provided in the MAT test manual from a norm group. Therefore, an increase in reading skills will be indicated by gains in the reading scores between pretest and posttest.

The expected goal of increasing the reading skills of 75 per cent of the pupils by six months was not reached. However, 55 per cent of those fourth graders included did increase their reading skills by at least .60.

TABLE 15

MEAN PERFORMANCE FOR GRADE 4 IN READING AREAS AS INDICATED BY THE METROPOLITAN ACHIEVEMENT TESTS

Subtest	Pretest	Posttest	Gain
Word Knowledge	2.63	3.08	.45
Reading	2.76	3.41	.65

For grade 5, Table 16, the average gain in reading was approximately five months, or an average gain of .49 grade equivalents.

TABLE 16

MEAN PERFORMANCE FOR GRADE 5 IN READING AREAS AS INDICATED BY THE METROPOLITAN ACHIEVEMENT TESTS

Subtest	Pretest	Posttest	Gain
Word Knowledge	3.31	3.51	.20
Reading	3.20	3.69	.49

A small average gain occurred between pretest and posttest in word knowledge. This gain was two months. Again, the per cent of pupils gaining six months or more in reading was less than that expected for the six month period. Fifty-one per cent of the sample included gained .60 or more in reading rather than the anticipated 75 per cent as stated in the goal component of the objective.

For grade 6, Table 17, average gains in reading and word knowledge were respectively -.05 and .54. Even though scores on the pre and post reading subtests were below that expected of sixth graders, data indicate that the group reporting lost approximately one-half month rather than gain between testings. On the other hand, the average gain in word knowledge was almost normal and resulted in .54 grade equivalent gain. Twenty-six per cent of the pupils who took pre and post tests gained at least six months in reading.

TABLE 17

MEAN PERFORMANCE FOR GRADE 6 IN READING AREAS AS INDICATED BY THE METROPOLITAN ACHIEVEMENT TESTS

Subtest	Pretest	Posttest	Gain
Word Knowledge	3.74	4.28	.54
Reading	4.07	4.02	-.05

Data for grade 7, Table 18, show that the average gain in reading was .54 or more than five months during the approximately six month period between pretest and posttest. This gain was about average, or, that which was expected between tests. Gains in word knowledge are below average resulting with a mean gain of less than four months. Pre and post means for both subtests are far from average. Post means in both cases are near 5.0 grade equivalents when they should be near 8.0 grade equivalents. The sample included performed approximately three grade equivalents below that set by the norm group. Fifty per cent of the pupils who took both pre and post tests gained six months or more in reading.

TABLE 18

MEAN PERFORMANCE FOR GRADE 7 IN READING AREAS AS INDICATED BY THE METROPOLITAN ACHIEVEMENT TESTS

Subtests	Pretest	Posttest	Gain
Word Knowledge	4.54	4.89	.35
Reading	4.09	4.63	.54

Objective C

Fifty per cent of the pupils enrolled in grades 2 through 7 will gain at least one month per month in achievement between pretest and posttest of the Metropolitan Achievement Tests.

Data on achievement are presented in two parts. These are detailed in Tables 19 through 24 and summarized in Table 25. Each part is by grade and

all data are based on pupils who completed all subtests on both the pretest and posttest of the Metropolitan Achievement Tests.

The stated objective is directly related to all needs and objectives that are concerned with learning skills. If success has any positive affect on behaviors of the affected domain, then perhaps those needs and goals which are concerned with such also are related to the objective.

The goal statement in Objective C is that of increasing the achievement of pupils in grades 2 through 7. Grade 1 is not included because comparable measures for pretests and posttests are not available. Grades 2 through 7 were administered comparable subtests of the Metropolitan Achievement Tests. The expected performance was set at an increase of at least one month's gain during one month of instruction.

Data for grade 2, Table 19, show the mean performances for the 26 pupils who completed all pre subtests and post subtests. As stated earlier, this included 48 per cent of all second graders. As is not the usual case of comparative performances on subtests, gains were highest on the Mathematics subtest where the group reporting averaged .61 or slightly more than six months in gains.

TABLE 19

MEAN PERFORMANCE ON ALL SUBTESTS OF THE
METROPOLITAN ACHIEVEMENT TESTS
GRADE 2

Subtest	Mean Pre	Mean Post	Variance Pre	Variance Post	Mean Dif.	Per Cent Gaining At Least 6 Mos.	$t(25)$
Word Knowledge	1.38	1.78	.054	.175	.40	43	7.021**
Word Analysis	1.25	1.69	.040	.310	.44	43	4.873**
Reading	1.20	1.50	.028	.598	.30	23	2.396*
Total Reading	1.33	1.65	.027	.218	.32	16	4.815**
Total Math	1.20	1.81	.034	.326	.61	58	6.013**

* Significant at the .05 level.
** Significant at the .01 level.

The difference between pre and post performances is highly significant. Smaller gains are recorded in the areas of reading with the least occurring between pre and post measures of the Reading subtest. This gain is reported to be .30 or three months. Thirty-seven per cent of all second graders gained .60 or more in achievement. Achievement is considered as a combination of all subtests of the MAT. Data on per cents of pupils gaining .60 or more are based on a count of all pupils who gained one month per month on each of all subtests and compared with all pupils taking all subtests. Based on the total number of pupils who took all subtests and compared with the total number of pupils who made gains, findings revealed that 37 per cent gained one month or more per month.

Data for grade 3, Table 20, show the mean performances for the 26 pupils who completed all pre and post subtests of the MAT. This includes 36 per cent of all third graders taking parts or all MAT subtests at Robinson. Post subtest scores, with the exception of reading and total reading, were about average for a six month instructional period. Scores were rather high in some cases, especially in spelling. Gains in spelling were exceptionally high. The average gain is computed to be 1.16 for the six months period. All other gains were average and above with the exception of reading and total reading. Gains were especially low in reading where an average gain of .05 is recorded. This, of course, should not have been the case since most resources were directed toward improving reading skills. Gains in achievement averaged .61 for the six months period. Based on the total number of pupils who took all subtests and compared with the total number of pupils who made gains, findings revealed that 59 per cent gained one month or more per month.

Table 21 shows that gains were average or above for all subtests except the Word Knowledge and Word Discrimination subtests. Gains for each of these subtests were .40. Scores varied about the same for all subtests with the exception of the Language Total and Spelling subtests. The variability of post scores on the Language Total subtest was extremely high as were the post scores. The goal of raising the achievement levels of fifty per cent of all pupils in grades 2 through 7 at a rate of one month per month was reached. The average gain in achievement was .80 if achievement is to be considered as a combination of all subtests. Based on the total number of pupils who took all subtests and

compared with the total number of pupils who made gains, findings revealed that 53 per cent gained one month or more per month.

TABLE 20

MEAN PERFORMANCE ON ALL SUBTESTS OF THE METROPOLITAN ACHIEVEMENT TESTS GRADE 3

Subtest	Mean Pre	Mean Post	Variance Pre	Variance Post	Mean Dif.	Per Cent Gaining At Least 6 Mos.	$t(25)$
Word Knowledge	1.87	2.41	.202	.411	.54	46	5.907**
Word Analysis	1.97	2.53	.501	.776	.56	62	6.440**
Reading	1.90	1.95	.172	.593	.05	38	.313
Spelling	1.78	2.94	.269	1.215	1.16	77	6.335**
Math Computation	1.98	2.70	.362	.596	.72	69	7.801**
Math Concepts	2.03	2.65	.350	.719	.62	54	6.819**
Math Problem Solving	1.99	2.79	.303	.762	.80	73	6.852**
Total Math	1.93	2.69	.283	.594	.76	81	10.478**
Total Reading	1.88	2.15	.171	.332	.27	31	2.856**

** Significant at the .01 level.

TABLE 21

MEAN PERFORMANCE ON ALL SUBTESTS OF THE METROPOLITAN ACHIEVEMENT TESTS GRADE 4

Subtest	Mean Pre	Mean Post	Variance Pre	Variance Post	Mean Dif.	Per Cent Gaining At Least 6 Mos.	$t(32)$
Word Knowledge	2.63	3.08	.319	.651	.45	37	3.584**
Reading	2.76	3.41	.394	.866	.65	55	4.829**
Language Total	2.56	4.59	.619	7.770	2.03	61	3.955**
Arithmetic Computation	3.20	4.13	.328	.392	.93	82	11.619**
Arithmetic Problem Solving	2.88	3.38	.240	.413	.50	43	5.335**
Word Discrimination	2.72	3.12	.633	.516	.40	45	4.689**
Spelling	2.82	3.60	1.170	1.611	.78	61	8.179**

** Significant at the .01 level.

Data for grade 5, Table 22, include mean performances for 32 fifth graders or 50 per cent of all fifth graders. These 32 fifth graders completed all pre and post subtests of the MAT. With the exception of the subtest of Arithmetic Computation, all other subtests' post scores are below average for a fifth grade group. The average gain for this subtest is, however, below average being .37 or almost four months. The greatest gains were made on the Language Total subtest. These gains averaged approximately one month per month for the group. Deviating somewhat from the trend, gains in reading averaged five months. Scores varied rather consistently for all subtests with only a slight difference for the Language Total pretest.

TABLE 22

MEAN PERFORMANCE ON ALL SUBTESTS OF THE
METROPOLITAN ACHIEVEMENT TESTS
GRADE 5

Subtest	Mean Pre	Mean Post	Variance Pre	Variance Post	Mean Dif.	Per Cent Gaining At Least 6 Mos.	t(31)
Word Knowledge	3.31	3.51	.206	.405	.20	34	1.473
Reading	3.20	3.69	.152	.632	.49	46	2.814**
Language Total	3.62	4.25	.587	.679	.63	59	2.870**
Language Skills	3.84	4.03	.411	.655	.19	28	.934
Arithmetic Computation	4.45	4.82	.165	.387	.37	35	2.792**
Arithmetic Problem Solving	3.88	4.16	.250	.397	.28	34	2.026
Social Studies Information	3.29	3.69	.177	.416	.40	35	2.887**
Social Study Studies Skills	(Only 37 per cent of the pupils already matched on complete pre and post subtests have scores for this subtest. Computed data would be invalid for group inference.)						
Science	3.57	3.93	.209	.693	.36	34	2.066*

* Significant at the .05 level.
** Significant at the .01 level.

The goal of increasing the achievement level of 50 per cent of all pupils at a rate of one month per month was not reached. Gains, however, did average .43 or slightly more than four months. The per cent of all pupils reporting who made gains of one month per month is 38 per cent.

Analyses of data for grade 6, Table 23, revealed that negative gains occurred between pre and post assessments in four areas of achievement. These include a gain of -.05 in reading, -.07 in social studies information, -.07 in science, and -1.01 in social studies study skills. A review of pupil performances by class showed that over 75 per cent of those pupils who made negative gains in reading were of the same class.

TABLE 23

MEAN PERFORMANCE ON ALL SUBTESTS OF THE
METROPOLITAN ACHIEVEMENT TESTS
GRADE 6

Subtest	Mean Pre	Mean Post	Variance Pre	Variance Post	Mean Dif.	Per Cent Gaining At Least 6 Mos.	$t(27)$
Word Knowledge	3.74	4.28	.864	1.040	.54	43	5.019**
Reading	4.07	4.02	.984	.992	-.05	26	-.339
Language Total	4.49	4.95	.948	1.341	.46	36	2.620*
Language Study Skills	4.31	5.05	1.011	2.169	.74	43	3.077**
Arithmetic Computation	4.89	5.08	.387	.285	.19	18	1.940
Arithmetic Problem Solving	4.60	4.69	.646	.727	.09	25	.692
Social Studies Information	3.87	3.80	.902	.651	-.07	25	-.417
Social Studies Study Skills	4.84	3.83	1.191	1.341	-1.01	14	-3.554
Science	3.87	3.80	.902	.651	-.07	50	-.417

* Significant at the .05 level.
** Significant at the .01 level.

A contact with school officials who reviewed these pupils' records revealed such information on the pupils including: that over 60 per cent of the pupils in this class had performed in a similar manner in earlier grades, that intentional homogeneous grouping was not a factor which contributed to these pupils being together as a class, but instead, their grouping was purely incidental, that these pupils exhibited rather strongly behaviors indicating that they had problems that affected their performances in school, and that teacher performance, relating to the teacher's impact on the pupils, evidently had no negative affect upon the pupils since performances during prior years did not show such a trend. More than 65 per cent of the pupils in the same class mentioned earlier were responsible for negative gains recorded in social studies information, science, and social studies study skills.

Gains were low in all other areas of achievement except word knowledge and language study skills. These gains were respectively average and slightly above average. The average gain in achievement for the six month period was .09. Gains in achievement for the group, therefore, are nominal or barely none at all.

Data for grade 7, Table 24, show that the greatest gains occurred in reading, arithmetic problem solving, and science. With the exception of science, gains are usually low in these areas. A negative gain is recorded for the group for the Language Study Skills subtest. The mean performance, however, was about average when compared with those of the other subtests.

The average gain for the seventh grade group was approximately .33 in achievement. Thus, a month per month gain in achievement was not obtained.

The anticipated goal as set in Objective C was to raise the achievement level of 50 per cent of the pupils in grades 2 through 7 at a rate of one month's gain after one month's instruction. Examining the data in Table 25, one can see that the per cents of pupils in different grade levels who completed all subtests for pretest and posttest and gained six months or more range from 31 per cent to 59 per cent. Considering all grade levels (2 through 7), the per cent of pupils completing all subtests for pretest and posttest and gaining six months or more is approximately 44 per cent.

TABLE 24

MEAN PERFORMANCE ON ALL SUBTESTS OF THE
METROPOLITAN ACHIEVEMENT TESTS
GRADE 7

Subtest	Mean Pre	Mean Post	Variance Pre	Variance Post	Mean Dif.	Per Cent Gaining At Least 6 Mos.	t(33)
Word Knowledge	4.54	4.89	.867	1.426	.35	44	2.590*
Reading	4.09	4.63	1.070	2.265	.54	50	4.118**
Language Total	4.76	5.13	1.259	1.978	.37	41	2.118*
Language Study Skills	4.94	4.88	3.207	2.548	-.06	27	-.251
Arithmetic Computation	5.21	5.46	.405	.524	.25	29	3.073**
Arithmetic Problem Solving	4.90	5.49	.915	.910	.59	56	3.987**
Social Studies Information	4.49	4.54	1.484	1.667	.05	27	.342
Social Studies Study Skills	4.86	5.06	1.045	1.394	.20	47	.847
Science	4.25	4.95	.983	1.480	.70	62	4.104**

* Significant at the .05 level.
** Significant at the .01 level.

TABLE 25

PER CENT OF PUPILS GAINING SIX MONTHS
OR MORE IN ACHIEVEMENT

	2nd	3rd	4th	5th	6th	7th
Number of Pupils Taking Pretest	59	75	60	64	47	48
Number of Pupils Taking Posttest	52	70	59	61	46	45
Matched Sample	26	26	33	32	28	34
Per Cent of Sample Gaining Six Months	37	59	53	38	31	42

Objective D

All pupils will increase their attendance so that the per cent of attendance for the 1970-71 school year will indicate at least a 1.5 per cent improvement over the 1969-70 school year.

Past data have shown that there is not necessarily a positive correlation between attendance and achievement or that pupils whose attendances are near 100 per cent do not necessarily achieve more than those with less favorable attendance records. It is hoped, however, that a positive influence would be made on attendance by all the available and active resources during the past school year. This especially includes the efforts of the lead teacher, attendance aide, educational aides, and the social worker. In light of these statements, Objective D is associated in varying degrees to all of the needs and goals described earlier for Robinson Elementary School. A review of the duties of the lead teacher, attendance and educational aides, and the social worker indicated that they all had a part to play in improving attendance. A true evaluation of the effectiveness of their efforts, however, could be made only if one were able to determine and weigh the causes for each absence which was not successfully thwarted by services rendered. Therefore, the data provided are given with the assumption that all services were not supplied purposely to increase attendance. Those services provided by the attendance aide and social worker were, on the other hand, for the purpose of improving attendance.

The data in Table 26 show that the goal of increasing the per cent of attendance by at least 1.5 was not reached. There was no change in yearly per cents of attendances even though some monthly per cents of attendances were different. The per cent of attendance for both years was 88 per cent.

Data included were used to compare the per cents of attendances for the 1969-70 and 1970-71 school years. Comparisons are yearly and monthly. Also included are mobility indices which are intended to show and compare migration. These are given for four school years between 1967 through 1971. With the exception of the 1967-68 school year, mobility indices changed only between one to two per cent.

TABLE 26

PER CENT OF ATTENDANCE

Month	Per Cents 1969-70	Per Cents 1970-71	Difference	Changes by Month 1969-70	Changes by Month 1970-71
September	93	94	1	...	...
October	91	90	-1	-2	-4
November	90	88	-2	-1	-2
January	83	89	6	-7	1
February	83	85	2	0	-4
March	87	86	-1	4	1
April	87	87	0	0	1
May	89	86	-3	2	-1
June	86	87	1	-3	1
YEAR	88	88	0	...	...

MOBILITY INDEX

1967-68	1968-69	1969-70	1970-71
.12	.22	.21	.23

It must be considered, however, that the mobility indices that suggest migration include migration to as well as from the school. Equally important is the fact that part of this migration results from that between schools within the Atlanta Public Schools and another part results from that between the Atlanta school system and another school system.

A desired outcome leading to the placement of individuals who would provide services to improve attendance was to raise the per cent of attendance in each Title I school to that of the city-wide average. The city-wide average for the 1970-71 school year was 91.2 per cent. Robinson did not achieve this goal. Its per cent of attendance for the 1970-71 school year was 3.2 per cent less than the city-wide per cent of attendance.

X. COST EFFECTIVENESS

A cost effectiveness analysis has been made to determine the cost for the amount of reading gains for each grade group. Presented in Table 27 are data based on the pre-post group for the 1970-71 school year. This pre-post group represents those pupils who were enrolled and were administered both the pre

TABLE 27

COST ANALYSIS OF READING GAINS BY GRADES

	Grades							TOTAL
	First	Second	Third	Fourth	Fifth	Sixth	Seventh	1 - 7
ADA for Grade	45	48	68	55	58	43	45	352
ADA Pre/Post Population	32	27	52	35	49	35	40	270
Per Cent of Total Population	9.0	8.0	15.0	10.0	14.0	10.0	11.0	77.0
Expenditures - Pre/Post Population								
A. General Funds								
1. Regular								
a. Salary	$21,710	$19,298	$36,184	$24,123	$33,772	$24,123	$26,535	$185,745
b. Non-Salary	1,527	1,358	2,546	1,697	2,376	1,697	1,867	13,068
2. CIP								
Salary	$ 184	$ 163	$ 307	$ 205	$ 287	$ 205	$ 225	$ 1,576
3. Total General Funds								
a. Salary	$21,894	$19,461	$36,491	$24,328	$34,059	$24,328	$26,760	$187,321
b. Non-salary	1,527	1,358	2,546	1,697	2,376	1,697	1,867	13,068
c. TOTAL GENERAL FUNDS	$23,421	$20,819	$39,037	$26,025	$36,435	$26,025	$28,627	$200,389

TABLE 27 (Cont'd.)

	Grades							
	First	Second	Third	Fourth	Fifth	Sixth	Seventh	TOTAL 1 - 7
B. Special Funds								
1. Title I								
a. Salary								
(1) Lead Teacher	$1,233	$1,028	$1,952	$1,336	$1,850	$ 0	$ 0	$ 7,399
(2) All Other	2,084	1,852	3,473	2,315	3,242	2,315	2,546	17,828
b. Non-salary	13	11	21	14	20	14	16	109
c. TOTAL TITLE I	$3,330	$2,695	$5,652	$3,665	$5,112	$2,329	$2,563	$ 25,336
2. ESAP								
a. Salary	$ 94	$ 83	$ 157	$ 105	$ 147	$ 105	$ 115	$ 806
b. Non-salary	32	29	54	36	50	36	39	276
c. TOTAL ESAP	$ 126	$ 112	$ 211	$ 141	$ 197	$ 141	$ 154	$ 1,082
3. Total Special Funds								
a. Salary	$3,411	$2,757	$5,788	$3,756	$5,259	$2,420	$2,662	$ 26,033
b. Non-salary	45	40	75	50	70	50	55	385
c. TOTAL SPECIAL FUNDS	$3,456	$2,797	$5,863	$3,806	$5,329	$2,470	$2,717	$26,418

TABLE 27 (Cont'd.)

	Grades							
	First	Second	Third	Fourth	Fifth	Sixth	Seventh	TOTAL
Total Expenditures-Pre/Post Population								
A. Salary	$25,305	$22,218	$42,279	$28,084	$39,318	$26,748	$30,963	$214,915
B. Non-salary	1,572	1,398	2,621	1,747	2,446	1,747	1,922	13,453
C. TOTAL EXPENDITURES PRE/POST POPULATION	$26,877	$23,616	$44,900	$29,831	$41,764	$28,495	$32,885	$228,368
Cost per Pre/Post Pupil								Overall Average
A. General Funds								
1. Salary	$ 684	$ 721	$ 702	$ 695	$ 695	$ 695	$ 669	$ 694
2. Non-salary	48	50	49	48	48	48	47	48
3. TOTAL GENERAL FUNDS	$ 732	771	751	743	743	$ 743	716	742
B. Special Funds								
1. Salary	$ 107	$ 102	$ 111	$ 107	$ 107	$ 69	$ 67	$ 95
2. Non-salary	1	1	1	1	1	1	1	1
3. TOTAL SPECIAL FUNDS	$ 108	$ 103	$ 112	$ 108	$ 108	$ 70	$ 68	$ 96
C. Total Expenditures per Pre/Post Pupil								
1. Salary	$ 791	$ 823	$ 813	$ 802	$ 802	$ 764	$ 736	$ 789
2. Non-salary	49	51	50	49	49	49	48	49
3. TOTAL EXPENDITURE PER PRE/POST PUPIL	$ 840	$ 874	$ 863	$ 851	$ 851	$ 813	$ 784	$ 838
Rate of Reading Gain (Per cent)	109	43	20	81	87	-43	70	52
Ending Reading Level (Grade)	1.69	1.65	2.15	3.41	3.69	4.02	4.63	
Projected Cost for One-Grade-Unit of Gain								
A. General Funds	$ 672	$1,793	$3,755	$ 917	$ 854		$1,023	$ 1,427
B. Special Funds	99	240	560	133	124		97	185
C. TOTAL PROJECTED COST FOR ONE-GRADE-UNIT OF GAIN	$ 771	$2,033	$4,315	$1,050	$ 978		$1,120	$ 1,612

and post tests of the Metropolitan Achievement Tests (MAT). Statistics used to determine the per pupil cost are the Average Daily Attendances (ADA's) for each grade group. These ADA's do not represent the number of pupils who took the pre and post reading test for each grade level. Instead, they represent the average daily attendances of those pupils who were enrolled at the time of the pretest and at the time of the posttest.

Analyses were based on the 1970-71 school year's expenditures of general and special project funds. The total expenditures for each of the accounts are different from that previously given in Section VIII under School Operating Cost. The costs covered in that section included plant operation, maintenance and repair, and equipment. Expenditures included in the cost effectiveness analysis consist of only those costs that can be related to improving reading skills. These consist of expenditures for salaries, materials, and supplies.

In addition to general funds which included CIP, expenditures from special project funds are reported and included those from the Title I regular program and the Emergency School Assistance Program (ESAP).

Data from the cost analysis table show the cost per pupil for general and special project funds by grade level. Costs were lowest for the seventh grade group for both general and special project funds. On the other hand, the highest cost for general funds was for the second grade group and the highest for special project funds was for the third grade group. In both cases, the heavy concentration of funds was basically with the impact group (grades 1-3).

The per pupil costs of total expenditures were highest for the second grade group and lowest for the seventh grade group. The greatest per pupil costs of total expenditures existed for grades one through five. This agrees with the major thrust of the instructional program which was aimed at improving reading skills in grades one through five.

Data also show the rate of reading gains for grades 1-7. These suggest that the rate of gains for grades 1, 4, 5, and 7 are near normal or above normal. However, reading levels for all grades except grade 1 are below average. The greatest deficiencies according to the data exist among seventh graders where grade equivalents in reading averaged 4.63 or approximately three grade levels below average.

If costs or the amount of resources, teacher time, specific reading materials, etc. have any favorable effect on reading gains, then an increase of such should result in greater pupil gains in reading. According to the 1970-71 data on per pupil costs, pupil gains, and pupil rate of gains, a projected cost for one-grade-unit of gain has been computed. This includes projections for all grade levels except grade 6 where pupil gains were negative. Comparing the data on per pupil cost for one-grade-unit of gain, one can see that in order to get one month's gain during one month of instruction the cost per pupil in grade 1 need not be as high as it was for the 1970-71 school year. In fact, costs per pupil should be around $771 instead of $480 in order to obtain one-grade-unit of gain. This, of course, is based on the ADA for that grade level during the 1970-71 school year. Data for all other grade levels suggest that additional expenditures are necessary for a similar population in order to achieve one month's gain per month's instruction. Again, projections are based on the ADA for the 1970-71 school year.

XI. RETENTION

The Atlanta Public Schools has a basic philosophy concerning the promotion, retention, and grade placement of pupils. It is believed that these should be determined on the basis of what will contribute most to the individual pupil's realization of his greatest potential toward becoming an effective, wise, and good citizen in a democratic society. In light of this philosophy and the performances of four pupils who were retained in their respective grade levels, the reasons given for retaining these pupils were justifiable ones and retentions are believed to have been made in the best interest of the pupils.

Included as the four retained pupils at Robinson were two third grade pupils, one fourth grade pupil, and one fifth grade pupil. Reasons given for retaining the two third grade pupils were slow or underachieving, irregular attendance, and unsatisfactory progress as shown by the Metropolitan Achievement Tests. The reason given for retaining the fourth grade pupil was that of irregular attendance. The fifth grade pupil was retained because

of very poor work habits, underachieving, and unsatisfactory progress as shown by the Metropolitan Achievement Tests.

XII. INSERVICE AND WORKSHOPS

In an effort to familiarize teachers with new and existing concepts concerned with teaching techniques, testing procedures, special support programs, and developing and understanding behavioral objectives, various workshops and inservice programs were held. These included the following:

A. A workshop held on August 27, 1970, and covering the use of Standardized Instruments for Diagnosing. Participants included classroom teachers.

B. Workshops held on August 29 and October 12, 1970, entitled "Developing Behavioral Objectives." Participants included classroom teachers.

C. An inservice program on the Comprehension Improvement Program (CIP). Attendants included all first through third grade teachers.

D. An inservice Reading Clinic program. Attendants included the lead teacher and one classroom teacher.

E. An inservice program held on March 16, 1971, covering Woodcraft in the elementary schools. Attendants included the entire school faculty.

XIII. CONCLUSIONS

Needs that could be satisfied by an instructional program were identified and enumerated for the Robinson school community. These needs, found in Section III, Needs Assessment, were later presented as tasks in goal and objective formats where the accomplishment of such tasks would be the accomplishment and achievement of the written goals and objectives. From the available data, facts regarding these goals and objectives have been presented throughout this report. Based on these facts, a summary statement

regarding the accomplishment of each written goal and objective is subsequently given. The content of each of the four written goals is also given and facts supporting their accomplishments are as follows:

A. The first goal statement related intentions of providing a reading program which would be aimed at developing those reading skills that would lead to independence in reading. Attempts toward reaching this goal resulted in the development of a reading program which was coordinated by a lead teacher. Supports to the lead teacher and other personnel involved in the reading program included inputs during inservice programs such as the Reading Clinic; special assistance programs such as CIP, Title I, and ESAP, where assistance involved obtaining materials, supplies, equipment, and personnel; and workshops designed to improve teacher effectiveness in teaching and assessing reading skills.

B. A second goal related the aim of providing suggestive techniques and procedures designed to improve the school's reading program. Attempts toward reaching this goal included providing the service of a full-time lead teacher who was trained in areas concerned with techniques and procedures used in improving reading programs. Resource personnel trained in the area of reading were available and were consulted periodically on techniques and procedures for writing behavioral objectives.

C. Developing an instructional program designed to assess pupil's progress through continuous diagnostic procedures was another stated goal at Robinson. Efforts toward accomplishing this goal included assistance from the CIP program and use of its diagnostic tests. Another effort was the input received during the workshop for teachers which included information and demonstrations concerning using standardized instruments for diagnosing. An attempt was also made toward diagnosing pupils' reading skills and assessing growth by using the Newman's Independent Reading, Writing, and Research Ability Analysis.

D. A fourth goal had to do with providing assistance to teachers and pupils toward bridging the communication gap between pupils and

teachers through an experience-based curriculum. The approach to solving this problem was made by generalizing the concepts of the ESAP program and implementing a more social or experience-based curriculum so that needs could be met through a language experience-industrial arts program which would provide opportunities for necessary psychological and social adjustments of teachers and pupils.

From the preceding goals, more direct tasks were sought which were also aimed at satisfying the identified needs of the Robinson pupil population. These were the objectives of the instructional program as enumerated in Section V, Performance Objectives.

Results as indicated from data on these objectives are as follows:

A. The degree of attainment of the objective concerned with increasing the reading skills of eighty per cent of the pupils enrolled in grades 1 through 5 at the rate of one month's gain per one month's instruction and measured by the Newman's Independent Reading, Writing, and Research Ability Analysis could not be determined. This was due to the inconsistent gathering of test data by classroom teachers for the first through fifth grade groups. Teachers were not enthusiastic about administering the test and questioned its necessity.

B. Seventy-five per cent of the pupils enrolled in grades 2 through 7 did not increase their reading skills at a rate of one month per month. Data from reading areas of the MAT showed that between 16 to 55 per cent of the pupils in grades 2 through 7 who took both pre and post tests gained at least one month per month. Data showed that the greatest gains and the largest per cents of pupils making these gains were from grades 4, 5, and 7. The least gain was recorded for grade 6 as a negative gain.

C. The goal set by the third objective was that fifty per cent of the pupils enrolled in grades 2 through 7 would gain at least one month in achievement where achievement was considered as a combination of all subtests of the MAT. Data showed that this goal was reached

for grades 3 and 4. Other grades had 31 to 42 per cents of pupils making gains of 1 month per month in achievement.

D. Increasing attendance for the 1970-71 school year by at least 1.5 per cent over the 1969-70 school year was another objective at Robinson. This increase would have improved the per cent of attendance from 88 per cent to 89.5 per cent but would still be below the city-wide average of 91.2 per cent. Data showed that the average per cent of attendance for the 1970-71 school year did not change from the 1969-70 school year, but instead, remained the same 88 per cent. Data also showed that the mobility index for the 1970-71 school year increased by 2 per cent over the mobility index for the 1969-70 school year.

Being a Title I school led to the adoption of all Title I objectives which were appropriate for the Robinson school program. Written differently from other instructional objectives was that which dealt with raising the achievement level of pupils so that they would show a statistically significant difference in achievement at the .05 level. Data showed that: (1) the pre-post differences for eight of nine subtests for grade 2 were significant at the .05 level; (2) the pre-post differences for eight of nine subtests for grade 3 were significant at the .01 level; (3) the pre-post differences for all subtests for grade 4 were significant at the .01 level; (4) the pre-post differences for five of nine subtests for grade 5 were significant at the .01 and/or .05 levels; (5) the pre-post differences for three of nine subtests for grade 6 were significant at the .01 and/or .05 levels; and (5) the pre-post differences for six of nine subtests for grade 7 were significant at the .01 and/or .05 levels.

The Comprehensive Instructional Program set its goal as that of insuring a month's gain after one month's instruction for pupils in grades 1 through 3. Data showed that this gain was only reached by grade 1 if it is assumed that all first graders began their grade 1 program with a grade equivalent of 1.0. Grades 2 and 3 did not reach this goal.

Data to support the attainment of the ESAP objectives were not collected. The extent, therefore, of the accomplishment of the objective for the ESAP program was not determined. Subjective evaluations suggested that some of

the inter-pupil-teacher attitudes of rejection and suspicion did diminish. To what degree, however, is uncertain.

Data regarding per pupil cost and cost analysis show that, in keeping with the directed thrust of the instructional program, the greatest distribution of funds by grade level was for the first through fifth grade groups. Per pupil cost for grades 1 through 7 was computed as $838 and was based on the total ADA for Robinson. It was also based on expenditures directly related to the implementation of the instructional program. Total per pupil expenditures for the Atlanta system amounted to approximately $879. This however, includes costs not directly related to instruction such as those for operation, maintenance, and other miscellaneous costs.

Data also showed that the rate of pupil gain was low for all grade levels except grade one. It suggests that one approach toward improving pupil gains, conditions remaining the same, would be to increase the amount of money for each grade group. The suggested amounts, or projected costs, are included in Section X, Cost Effectiveness. These projections show an increase at each grade level except the first grade group where gains were slightly above average.

An indicator of the variability of the rate of reading gain by grade level may be given by the range of the per cents of reading gains. These per cents of reading gains are from 109 to -43, thus, giving a range of 152 per cent for grades 1-7. A range of the projected costs of all grades should likewise give some indication of the variability of the projected cost for one-grade-unit of gain for grades 1-7. The extremes of the projected costs for all grade levels, excluding grade six, are $4,315 and $771. The range, therefore, of the projected cost for one-grade-unit of gain is $3,544.

XIX. RECOMMENDATIONS

From the available data, it appears that the instructional program at Robinson has dutifully sought to satisfy those identified and recognized needs of its pupil population. It is hoped, however, that progress toward

greater satisfaction of pupil needs is forthcoming so that efforts may be directed toward satisfying not only those immediate pupil needs but also those needs that are less demanding but necessary for success toward becoming effective and contributing individuals.

Following the interpretations resulting from analyses of available data and conferring with individuals directly involved with the instructional program at Robinson, the following recommendations are made:

A. The performance criteria for the 1971-72 instructional program should be set, when possible, in accordance with the outcomes of this past year's instructional program. Consideration should be given to the fact that greater performance levels may be set if additional resources are available. A restriction is, however, that the preceding statement is made regarding the same or similar groups of pupils.

B. Concern at the school administrative level exists regarding the need for teachers to study the classifications of tests and also the need for teachers to become acquainted with the different subtests of the Metropolitan Achievement Tests. This should aid teachers in recognizing the importance of pupil assessment and familiarizing teachers with assessment procedures in order to strengthen the testing program.

C. A study of past pupil performances should be made in an effort to avoid grouping pupils who have experienced learning difficulties in the past. It was reported that accidental grouping occurred in one six grade class where performances were unsatisfactory. More efforts should be made to determine the low and negative rates of gain for the total six grade group.

D. Since the first grade group exhibited normal achievement gain, all possible efforts should be made to obtain similar gains in the future.

E. Special attention should be given to pupil gains and performance levels in mathematics areas. Pupil performances are especially low at the fifth, sixth, and seventh grade levels.

F. Teachers should be a part of those planning activities which are concerned with diagnosis and evaluation. This, of course, includes activities concerned with diagnostic testing. This kind of group planning could lead to the elimination of teacher failure to follow through on diagnostic testing activities such as that during the administering of the Newman's Independent Reading, Writing, and Research Ability Analysis.

G. Finally, the faculty should conduct self-evaluations, set realistic goals in their performances, proceed on the basis that pupils generally perform as expected, and pursue specific behavioral objectives on the part of pupils. Much work needs to be done to establish a positive climate for pupil achievement.